

II, No. 1
y 1957

CALIFORNIA JOURNAL OF EDUCATIONAL RESEARCH

EDUCATION READING ROOM

IN THIS ISSUE:

- The Criterion Problem in Teacher Selection L11
- Problem-Solving Discussion in Civics C18
- IQ's from Two Different Tests 190
- Maternity Leave Policies N.W.-6048
- Policy Handbooks in Elementary Districts (7)
- Relation Between Interest and Aptitude Tests
- Editorial: Lending a Hand



published by

CALIFORNIA TEACHERS ASSOCIATION

693 Sutter Street San Francisco 2 California

CALIFORNIA JOURNAL OF EDUCATIONAL RESEARCH

Published by the CALIFORNIA TEACHERS ASSOCIATION for the
CALIFORNIA ADVISORY COUNCIL ON EDUCATIONAL RESEARCH

Editor

KENNETH R. BROWN
Director of Research, C.T.A.
and Chairman of the Council

Associate Editor

GARFORD G. GORDON
Assistant Director of Research, C.T.A.
and Secretary of the Council

Editorial Assistant

ANNE T. PROTOPOPOFF



EDITORIAL BOARD: MEMBERS OF THE COUNCIL

HUGH M. BELL

Professor of Psychology
Chico State College

MERLE H. ELLIOTT

Director of Research
Oakland City Schools

HOWARD A. BOWMAN

Director, Evaluation and Research
Los Angeles City Schools

D. WELTY LEFEVER

Professor of Education
University of Southern California

LILLIE L. BOWMAN

Director, Bureau of Research
San Francisco Unified School District

HENRY W. MAGNUSON

Chief, Bureau of Education Research
State Department of Education

HAROLD D. CARTER

Professor of Education
University of California, Berkeley

DAVID G. RYANS

Professor of Education
University of California at Los Angeles

ARTHUR P. COLADARCI

Associate Professor of Education and Psychology
Stanford University

HARRY W. SMALLENBURG

Director, Division of Research and Guidance
Los Angeles County Schools

ROBERT E. CRALLE

Executive Secretary
California Association of School Administrators
Pasadena, California

WILLIAM H. STEGEMAN

Director of Research
San Diego City Schools

HENRY I. WEITZEL

Research Director
Pasadena City Schools



Published at San Francisco five times a year: January, March, May, September, and November. Subscription price: \$6.00 per year; single copies, \$1.50. All correspondence should be directed to: CALIFORNIA JOURNAL OF EDUCATIONAL RESEARCH, 693 Sutter Street, San Francisco 2, California. Checks should be made payable to the CALIFORNIA TEACHERS ASSOCIATION.

Certain articles in this *Journal* are listed in *Psychological Abstracts*.

Member of the Educational Press Association of America

Entered as second class matter at the Post Office at San Francisco, California

Copyright 1957 by the California Teachers Association

CALIFORNIA JOURNAL OF EDUCATIONAL RESEARCH

Volume VIII

January, 1957

Number 1

CONTENTS

Lending a Hand	2
<i>An Editorial</i>	
An Illustration of the Criterion Problem in Teacher Selection	3
<i>A. Garth Sorenson</i>	
Problem-Solving Discussion and the High School Civics Course	8
<i>Waldo Phelps and Milton Dobkin</i>	
Maternity Leave Policies in Cities Over 200,000	16
<i>Ward M. Nichols</i>	
Comparison of IQ's Derived from Two Different Tests	23
<i>Philip G. Nash</i>	
Governing Board Policy Handbooks in Non-City Elementary Districts	27
<i>Dickey L. Mitchell, Jr.</i>	
Factors Related to Vocabulary Size	34
<i>Delwyn G. Schubert</i>	
Relative Importance of Certain Competences for Secondary Music Teachers	36
<i>Forrest J. Baird</i>	
The Relation Between Interest and Aptitude Tests in Art and Music .	43
<i>J. C. Gowan and May Seagoe</i>	
Book Reviews	46

THE EDITORS SAY:**Lending a Hand**

More than once the California State Advisory Council on Educational Research has reviewed its avowed purposes, looking especially hard at one which charges it to advance the coordination of research in the State. It believes it has gained some successes in this direction. The present journal is one. The annual research conference, just concluded last November 17 for the eighth time, is another. Other achievements could be mentioned, including the **Research Résumé** series introduced in 1956.

This last note gives the topic for this page. The Council presented at the San Francisco research conference the draft of a résumé aimed as closely as practicable at encouraging and advising the local school district and its staff in local research efforts. In a later form this is to be published as **Research Résumé No. 3, Research in School Systems**. It is immediately apparent that any such advice would have to be expressed in altogether diplomatic and professionally objective terms. The Council has no intention whatever of trying to squeeze educational research in California into any kind of mold, even if such a goal were possible. At most, Council advice could be no more than a mild form of goading to stimulate local effort and to ward against the more obvious, gross negligence which might follow half-hearted attempts to produce useful research.

The draft of the résumé was made the object of one of the discussion sections of the research conference. The suggestions that came out of this discussion will be entered into the published form of the résumé. There were conferees who agreed to send amendments from the more deliberate base of their home desks.

Research Résumé No. 3, planned for distribution in February, will argue against local indifference to educational research and will give a few examples of kinds of problems which might be "researched" successfully at classroom or district level. The suggestions are made merely to stimulate thinking; they are not projects which California must get organized to undertake. Along with these are a few very broad cautions which will largely appeal to common sense, but which nevertheless are fundamental to any successful research achievement.

Now, the résumé will undoubtedly turn out to be a "growing thing." It may have as many meanings and applications as there are situations to research among the many classrooms of California. The Council pledges itself to be receptive to any suggestions from the field that will enhance its usefulness, and is truly hopeful that numerous suggestions will appear which will make a later version of the document a gem-like compendium for local research directors and instructional staff. In other words, we hope that what we have brought together will come to be a collection of precious stones rather than a bag of marbles.

We commend **Research Résumé No. 3** to you, and await your reply.

K.R.B.

An Illustration of the Criterion Problem in Teacher Selection

A. GARTH SORENSEN

That we are unable to predict teacher effectiveness is not because no one has tried. There have been studies, of sorts, in profusion. While it is true that many of these have suffered from faulty research design or an insufficient number of subjects, some have been conducted by competent researchers and have produced findings both significant and instructive. These findings can be summarized in two statements: There are no general predictors of teacher effectiveness. There is no general agreement as to what constitutes the pattern or patterns of essential characteristics of a competent teacher (1, 2).

To be more specific, there appears to be little or no relationship between measures of teacher success and factors which common sense might tell us should have predictive validity, namely academic achievement, knowledge of subject matter, success in professional education courses, age, or intelligence. But this state of affairs becomes more understandable when we consider the nature of the criterion variables which have thus far been employed. We find that the most widely used measure of teacher competence has been the overall opinion of supervisors and administrators, reported by means of rating scales. Most of the rating scales have been made up of items which are subjective, undefined, and varied, there being no specificity and consistency as to what traits a supervisor might be expected to observe and evaluate. Considerable halo effect is, therefore, to be found whenever several traits are to be rated.

A perhaps unexpected finding is the fact that, in spite of the unsatisfactory nature of the commonly used rating scales, it is frequently possible to get fairly high reliabilities among supervisory ratings. Since these ratings do not correlate very highly with measures of pupil gains, the obvious question presents itself, to what are they related? One might conjecture that the reliabilities represent some unspecified bias which is shared by supervisors and administrators. Or one could take the view

A. Garth Sorenson is Assistant Professor of Education and Director of the Selection and Counseling Service of the School of Education at the University of California at Los Angeles. He was an assistant professor of education and assistant director of the University Guidance Center at the University of Utah before coming to his present position three years ago. He holds the degree of doctor of philosophy which he obtained at the University of Utah in 1950.

that they should not be dismissed as mere bias until a further attempt is made to discover whether or not they have some useful meaning.

Adopting the point of view that it would be worthwhile to know the significance of supervisory ratings, the writer examined the reports written by a number of training teachers about the work of a sample of student teachers ($N = 315$). The immediate purpose was to discover whether these reports would reveal some of the criteria implicit in the supervisors' judgments. The students were candidates for either the California General Secondary or Special Secondary Teachers Credential, and were all enrolled in the School of Education at the University of California, Los Angeles. They represented more than 30 teaching majors, had done their student teaching in as many different classes, and in several different high schools.

In analyzing the supervisors' reports, the writer attempted to categorize the various descriptive statements, and also to discover which statements or categories would characterize students receiving high grades, and which would characterize those receiving low grades in student teaching. The categories which resulted are obviously not factors in the statistical sense, nor is it assumed that the list which follows is exhaustive. However they appear to include most of the statements which were used to describe the student teachers.

Types of Items in Reports

Any supervisor's reports about a student teacher consist of a number of statements. It was not possible in most cases to tell which of these statements the training teacher considered most significant. It could not be assumed that the descriptions which appeared most often were most significant, for they were used indiscriminately to describe both high and low students. Nevertheless, it was possible to judge what appeared to be the approximate order of importance, as viewed by the training teachers, as follows:

Category A has to do with ability to maintain order in the classroom. Many of the training teachers indicated that the classroom atmosphere should be friendly as well as orderly, but it appeared that, to others, friendliness on the part of the student teacher was by no means a substitute for forcefulness. Unfortunately this category can not as yet be defined behaviorally. It was not possible to tell from the descriptions how the behavior of the student teachers who were able to maintain order differed from the behavior of those who were less able. Nevertheless most of the training teachers seemed to have no doubts as to whether a student teacher was able to maintain order, and if he could not, his grade was certain to suffer. But while it appeared that training teachers were relatively certain of their ratings in this category, they would probably not agree as to what constitutes adequate control. There was

some indication that what might have been regarded as good teacher-student rapport by one supervisor may well have bordered on disorder in the judgment of another.

Category B related to the preparation of lesson plans. "Good" lesson plans, it appeared, are highly organized, detailed step-by-step descriptions of what is to be covered and how, submitted to the teacher trainer for inspection well in advance. Some training teachers apparently wanted lesson plans to be followed rigorously. Others hoped that the student teacher would not follow them too rigidly—would be able to change them as the situation demanded. A few, it appeared, did not ask for them at all.

Category C related to the student teacher's response to criticism and suggestions. "Good students . . . accept criticisms gracefully . . . and carry out suggestions quickly." And yet other training teachers appeared to be quite uncritical and permissive, encouraging a student teacher to experiment and carry out his own ideas.

Category D relates to enthusiasm for teaching. Enthusiasm in the supervisors' opinions is demonstrated by student teachers' coming early and staying late, assisting with bulletin boards and classroom materials, spending time with individual pupils after class, bringing in extra materials. Among the comments about one student teacher who had received a low grade was the statement, ". . . did not spend extra time at school."

Category E concerns performance in front of the class, including the ability to speak well, to stimulate the group, to use audio-visual aids, to write well on the blackboard, to get ideas across to the pupils, to handle small groups, and especially important, to conceal any lack of self-assurance.

Category F has to do with the ability to bring about pupil gains, to help the pupils achieve the goals regarded as important by the training teacher. It is understandable that this category was not mentioned often, but a few supervisors apparently made estimates as to how much the class had improved.

Category G relates to personal appearance. Many of the student teachers who received low grades met this criterion very well, and yet in a few cases the report included such a glowing account of the student's charm, "lovely" smile, grooming, or poise, that one felt that appearance had had a positive effect on the grade.

Category H contains a miscellany of items which were stressed in only a few reports—overall grade-point-average, cultural background, business experience, participation in activities of religious groups. One is tempted to call this the halo category, since the halo effect seemed unusually strong in these cases.

Obviously not all the statements that were made about students can be included in the above categories. Such statements as "needs more experience—appreciative of racial problems—displayed the characteristics of a superior teacher—becomes discouraged but always cheerful—does not seek help of her own volition—lack of aggressiveness in voice and spirit," were hard to fit in.

The Problem of Reliability

The above categories would appear then, to illustrate an important part of the criterion problem, namely the lack of reliability—reliability defined as stability and consistency. More specifically the problem can be stated as follows:

1. Most important is the lack of behavioral definitions. Such traits as "ability to maintain classroom order" have not been behaviorally defined. What to one person is an "orderly classroom" may to another be "rigid and lacking in creativity." (Incidentally, the most overworked word in these reports was the term "creative." It was not behaviorally defined either.) To restate this point, until we can define terms behaviorally, the same words will mean different things to different people.
2. All supervisors do not employ the same criteria, e.g., it appeared that some training teachers do not require detailed lesson plans submitted in advance, whereas others insist upon them.
3. Criteria are weighted differently in the different subject matter areas, e.g., physical education teachers emphasized different traits than did English instructors.
4. The supervisors in the same subject matter area may weigh criteria differently, according to their individual attitudes and value patterns.
5. There was no attempt in this study to check the "intra-reliability" of supervisors, to determine whether a given training teacher was consistent in applying the same criteria to two different student teachers.
6. Throughout the reports, descriptions and interpretations were mixed together.

In addition to the above factors, which affect reliability, it was observed that the range of grades was very narrow. Most of the grades were A's and B's with only a few C's or lower. The statistical effect is to reduce the apparent magnitude of any correlation.

In pointing up the above limitations and weaknesses the writer is not suggesting that the grades examined were any less reliable than college grades in general. The lack of consistency was undoubtedly more apparent since the graders had tried to give their reasons for the grades assigned, something which college instructors in general would probably be quite reluctant to do. Nevertheless, assuming that the lack of reli-

ability suggested by this analysis does in fact exist, it is clear that the low correlations, or lack of correlation between such predictors as intelligence, knowledge of subject matter, etc., could in large part be explained by this fact alone.

There is one point to be made, however, which does not relate directly to the reliability problem. Assuming a stable criterion variable, and a wider range of grades, it does not necessarily follow that we would expect a high correlation between, say, intelligence as measured by a paper-pencil test, and such aspects of teaching competence as ability to maintain an orderly classroom when that trait is being measured mainly in terms of "forcefulness." Or to cite a second example, we would not logically expect a high correlation between overall grade point average and the grade in student teaching if the latter grade means willingness to put in extra time in non-academic activities. In short, it would appear that in some studies the lack of success in predicting teacher effectiveness was due to the fact that the investigators were trying to predict an unstable criterion variable from an illogical predictor.

That some investigators have achieved positive results, e.g., Ryans in the Teacher Characteristics Study (3), would suggest that the problem facing us is not entirely methodological but is partly conceptual in nature. If progress is to be made we must first agree on what we mean by teacher effectiveness, defined by field and level. We must continue to improve our instruments for appraising teacher performance, and we must train and persuade those who evaluate teachers to use the improved instruments as they make their evaluation.

REFERENCES

1. Barr, A. S., Bechdolt, B. V., Gage, N. L., Orleans, J. S., Page, C. R., Remmers, H. H., and Ryans, D. G. "Second Report of the Committee on Criteria of Teacher Effectiveness." *Journal of Educational Research*, 46 (May, 1953) 641-58.
2. Morsh, J. E. and Wilder, E. W. *Identifying the Effective Instructor: A Review of the Quantitative Studies, 1900-1952*. San Antonio, Texas: Air Force Personnel and Training Research Center, 1954.
3. Ryans, D. G. "The Investigation of Teacher Characteristics." *The Educational Record*, 34 (October, 1953) 370-96.

RESEARCH RESUME Series of the California Advisory Council on Educational Research

No. 1. *Annotated Bibliography: Gifted Child Education*. Revised September, 1956. \$1.00.

No. 2. *Survey: Gifted Child Education in California*. December, 1955. \$1.00.

Problem-Solving Discussion and the High School Civics Course

WALDO PHELPS AND MILTON DOBKIN

Courses of study in secondary school social science generally include the suggestion that discussion be utilized as a teaching technique. There is, however, division of opinion among social science teachers as to how much and in what way students should participate (1). Should the teaching method employ discussion consisting only of question-answer and informal class involvement led by the teacher? Or should the teaching technique, in addition, include formal student panels with a student chairman?

Purpose of the Study

The following project was undertaken in an attempt to answer some questions regarding the relative effectiveness of the two teaching techniques as applied to one social studies course: the study of civics (American government).

Specifically, the following questions were asked:

1. Is there a difference in the extent to which students fulfill the promise of their IQ scores in learning civics when the indicated teaching methods are compared?
2. Is there a difference in the amount of basic civics course content learned when the indicated teaching methods are compared?

Procedure Followed in the Study

This study was an attempt to measure quantitatively by means of course content tests the relative effectiveness of teaching civics by the traditional pattern of instruction and by a combination of the traditional pattern and a discussion unit. Civics appeared to be the most suitable social science course for the study. The problem-solving panel forum was selected as the best type because this discussion form involves all of the steps in the reflective thinking process, and can be sharply distinguished in theory and practice from question-answer or informal teacher-led discussion.

Waldo Woodson Phelps is Assistant Professor of Speech at the University of California at Los Angeles. Prior to coming to this position eight years ago he was a speech and social science teacher in the Burbank City Schools. He is chairman of the Secondary School Speech Education Interest Group of the Speech Association of America. He holds the doctor of philosophy degree from the University of Southern California.

Milton Dobkin is Assistant Professor of Speech at Humboldt State College. Prior to coming to this position in 1955, he taught at Los Angeles High School, Los Angeles State College, the University of Southern California, and in adult education classes in Los Angeles. He holds the master's degree from the University of Southern California.

Two civics courses were taught during each of two semesters by one of the writers. One of these classes was designated each semester as the experimental and the other as the control group. In the control group the oral work consisted of answering questions asked by the teacher, extra credit oral reports, and participation in informal, teacher-led class discussion.

Oral work in the experimental group included that of the control group, plus the "problem-solving discussion sequence," *i.e.* brief instruction in discussion theory, an extended series of problem-solving panel forums dealing with civics subject matter, and two short tests for knowledge of discussion theory. Thirty hours, or slightly under one-third of the total course time, was allotted to this sequence. Adjustment of the experimental group class work to allow time for discussion was achieved by curtailing teacher-led discussion. The general areas assigned to the first round of panels, to illustrate, were: presidential elections, general welfare programs, immigration, taxation, congressional investigations, congressional immunity, and tariffs and trade.

Two tests on content of the civics course, the initial one prepared by the instructor and the final standard examination prepared and administered by the principal, were utilized. The same tests were given to both the experimental and control groups at the same point in the course.

Equating Experimental and Control Groups

The individual pair technique was applied because it automatically insures that the means and dispersions of the capacity scores will be the same for both groups. Both the IQ score from the Otis test and the score made on the first content test given in civics were used in the pairing. This combination was used to place the mates at the same position on the learning curve early in the semester, and to pair them in terms of potential civics learning ability as well (2).

Pairs were matched only when the amount of difference between scores did not exceed ten per cent of the range for either of the matching criteria (2). The foregoing procedure resulted in the matching of thirty-nine pairs.

Evidence that the thirty-nine pairs matched by the individual pair method automatically provided equality between means of capacity scores and of shape of distributions was apparent; no significant difference existed in mean IQ's and their corresponding standard deviations. Further evidence was obtained by computing the correlation coefficient between IQ's and first test scores. The coefficient for the control group was +.44, and for the experimental group +.49. In both instances, the correlation was low and positive. There was no significant difference between the two coefficients, and it may be concluded that the thirty-nine experimental and control group pairs were evenly matched at the start of the semesters.

Analysis of the Data

Given this evenly matched start, what happened by the end of the semester? A correlation coefficient was computed to determine relationships between IQ's and final test scores. The coefficient for the control group matched pairs was +.22, for experimental group members, +.55. The correlation for the former group was no better than chance, which contrasted with the significant correlation for the experimental group. This means that the relationship between intelligence and achievement in civics course content remained constant between initial and final civics tests during the use of the experimental teaching method. (The difference between +.49 and +.55 was non-significant.) However, among those taught by conventional methods, the correlation between ability (IQ) and civics basic essentials knowledge dropped from a low but significant amount to non-significance (+.44 to +.22).

A coefficient between initial ranking as determined by the first civics test and ranking based on results of the final examination was also computed. The coefficient for the control group members was +.42, which was low and positive. The coefficient for experimental group members was +.82; the latter coefficient was, of course, much more significant than the former. Among the group taught by the experimental method those individuals with high initial civics knowledge and test scores finished the course among those with the highest test scores. Correspondingly, those in the lower ranks tended to remain among the lower group. However, among the control group (the conventional teaching method) there was little or no relationship between initial and final performance ranking of students within a class. It is therefore concluded that in the final test the matched pairs in the experimental group more nearly utilized their potential as suggested by their capacity scores and positions on the learning curve.

The mean of the differences between gains for the thirty-nine matched pairs was an average of 0.3 score points; the standard error of the mean difference was 1.15. Thus, no significant difference was found between the amount of gains in civics course content achieved by the group taught by the traditional pattern of instruction only and the group taught by a combination of traditional pattern of instruction and a discussion unit.

Civics Content—Findings and Conclusions

The gains of those students taught by a combination of traditional pattern of instruction and problem-solving discussion units correlate more highly with intelligence scores than the gains of those taught by the traditional pattern of instruction only. It was further discovered that students taught by the experimental method more nearly tended to reach their maximum achievement in basic essential materials in terms of initial posi-

tions on the learning curve. However, no significant difference in mastery of basic essentials civics course content was found between the thirty-nine matched pairs from the experimental and control groups. This similarity of achievement acquires additional significance when it is recalled that approximately one-third of the course time in the experimental groups was spent in the "problem-solving discussion sequence." It may be concluded that one-third of the course time may be used in this manner without sacrificing mastery of basic essentials course content.

Further Questions

The following questions were asked in the light of the findings of the principal experiment:

1. Is there an increase in knowledge of discussion theory?
2. What is the general performance level of the discussions?
3. Is there improvement in discussion performance?

Information was obtained from two sources. A test of knowledge of discussion theory was given at the beginning of each semester before any instruction or practice in discussion, and it was readministered at the end of each semester. The first and third, or beginning and final rounds of panels, with the same student personnel, were recorded for evaluation. This procedure was adaptable only to the two experimental groups.

The written test was composed of sixteen true-false questions (covering fundamental procedure in problem-solving discussion and distinguishing between discussion and debate) and material designed to test ability of students to phrase discussion topics, define terms, construct a problem-solving discussion outline, and to summarize.

Scoring of the sixteen true-false questions produced the following results: Students from the first experimental group improved an average of 3.8 score points, and second semester students 3.9 score points. There was a gain of approximately twenty-five per cent for each group. Furthermore, in the combined group of fifty-eight students there were only four losses, three of one point and one of two points. Fifty-four students gained from one to eight score points.

An item analysis of the true-false test results revealed that some key misconceptions about the purpose of cooperative discussion as distinguished from informal debate had been clarified by the end of the semester.

The remainder of the examination was designed to test ability of students to phrase discussion topics, define terms, construct a problem-solving discussion outline, and to summarize. Student written work was evaluated independently by three expert judges, each a PhD with major emphasis in Public Address with extensive training in discussion and a mean teaching experience of twenty-three years. The results may be briefly summarized as follows:

1. There was considerable improvement in student ability to phrase in writing suitable topics for discussion.
2. There was no improvement in student ability to define terms in a written test.
3. There was varying improvement in student ability to plan an outline utilizing the reflective thinking process.
4. There was no improvement in student ability to write a summary.

Because of the amount of listening involved in rating student discussions, it was necessary to employ four expert judges in the evaluations. Each judge had a doctorate in Speech, extensive training in discussion, and an average of twenty years of teaching experience. Each judge heard the first and third rounds of discussions involving the same group of students. A code system was used so that the judge evaluating the discussion did not know whether the panel being judged had been recorded at the beginning or the end of the semester.

Judges evaluated the discussions on a rating sheet prepared by the authors. For each item the following scale was used: poor—1; fair—2; average—3; good—4; excellent—5.¹

A summary of evaluations of recorded discussions for the combined classes disclosed that eleven of the fourteen panel groups improved during the semester. There were sixteen instances of improvement in individual discussion items, seven cases where there was no change, and only one loss. Quality of the discussions improved to the "average-good" category in the final round of the semester.

Conclusions on Discussion Instruction

The writers are aware that some of the data presented are of limited value due to inadequacies of the testing instrument and difficulties in rating. The following conclusions, however, are believed justified:

When instruction in problem-solving panel discussion and participation by students are included in high school civics courses:

1. There is an increase in knowledge of discussion theory.
2. The general performance level of discussions is above average at the end of a semester.
3. A measurable improvement in discussion performance level occurs.

These results were obtained by following the described "discussion sequence," and *because the instructor has a background of training in public speaking and discussion* (1).

¹ The following items were included: phrasing, choice of topic; adequate definition of terms; conversational quality and spontaneity; ability to follow problem solving outline; research; use of language; impartiality of chairman; ability of chairman to resolve argument; cooperativeness and attitude; summarization by chairman; guiding panel toward consensus by chairman; management of forum period by chairman.

Post-Experiment Reactions

While the writers feel that the data developed in this study are important, there are some empirical reactions to processes involved in the experiment which also seem important. Most of these involve the reactions of the instructor and students of the experimental classes to the methodology of the experimental groups. Following is a brief summary of reactions by the experiment instructor:

First, even presuming teaching competence and speech training background on the part of the instructor handling the course, it is still easier to teach civics by the traditional methodology. Second, since students must not be short-changed on actual civics content, and since not as much time is available to review assigned content materials, planning of panel topic areas must be done carefully so that the discussion work will accomplish as much toward this goal as teacher-led review would. Third, if the panel's work is to be productive of class learning, the panel's work needs to be good enough for the non-participating class members to benefit from it. Such benefit will not accrue if the panel develops as an impromptu affair without logical pattern, coherence, or evidentiary support. One or two unplanned panels without coherence will lead to an audience discipline problem.

Fourth, the most difficult area of discussion technique and theory for high school students to grasp is the organization and "follow-through" of the reflective thinking process which is the basis of "problem-solving" panel discussion. But it is precisely this area of discussion training which is most important in stimulating maturity of thought in the study of government. Insistence on the part of the instructor that this pattern of thought be followed, while difficult for the students, is important and well worth the effort.

Fifth, in the area of improvement of conversational speech skills there is great potential worth in the use of discussion units. Most students will experience general improvement in their own confidence and status during oral work in their civics classes *and in other classes* as some of their remarks recorded later in this paper indicate.

Sixth, the use of discussion assignments can utilize the abilities of superior students to a remarkable degree. Since each individual's grade or credit for panel work depends in a large degree upon the performance of the panel group as an integrated unit, the members are motivated to assist each other to insure the high quality of the final product. Through this pattern of real cooperation true leadership results in the planning sessions. The superior students are *asked* for help by the slower students. Their advice and intellectual leadership are sought by their peers instead of derided and are therefore freely given. And finally, these pace-setting activities of the superior students also develop during the teacher-led

discussion sessions. The result was that the non-panel class activities were also more productive. (Is it too obvious to state that students interacting on each other can produce more learning than the teacher can, if ability and desire are present?)

Student Opinions

Originally the writers had desired a systematic survey of student responses to the panel feature of the experimental semesters. This became impossible for the first semester since almost all of the students in the experimental group were graduating seniors. However, approximately fourteen weeks after the second experimental semester had ended, a spot check was made which revealed that over half of the second semester experimental group had taken civics while in their low senior semester and thus were still enrolled in high school. Accordingly, a simple query was prepared which the students were to answer anonymously to insure frankness. The queries were addressed to the students in unmarked envelopes via their home-room teachers. Questions asking for reaction to discussion sequence, at the time it took place in the course and since the course was taken, were included.

Sixteen out of nineteen students from the second experimental group who were still in high school responded to the queries. Despite minor variation, the general tone of the responses was remarkably similar. This is especially significant when one considers that the attitude of high school seniors four or five weeks before graduation (and with the opportunity to "sound off" without fear of retribution) is usually hyper-critical. Here are some samples which are typical of the group:

Panel discussion as taught in the class was of great value as it brought problems of national affairs out into the open for everyone to better understand them. . . . I have learned to talk more freely in groups of my friends and am not afraid to express my opinions in public for fear of not giving a good case. I use the panel techniques in committees to help reach decisions. This was a very interesting way to learn civics.

Yes. It made the course less dry and more interesting. I learned a lot about the problems of my own community and country. It was very interesting to be able to venture a little farther than books for needed information. I never cared for history or social studies until I had this class. The panel discussion broke some of the monotony of text reading. . . . Yes! I really have to laugh. Last week we had some panel discussions in our psychology class. I thought my panel was pretty good; but the others were very unorganized. The teacher didn't even know the difference—she thought they were all good. I feel as if I know more about discussion and I'm glad that I did learn about panel discussion.

I do not particularly think that the panel discussions helped me during the semester to any extent. However, it did help me during the course in analyzing problems and reaching a solution (sic). . . . After being out of the class I feel differently. The panel discussions did help me immensely in other classes. There have been times when it was necessary for me to be in panel discussions and I feel that I have had an extreme advantage over the

other students that do not know the procedures for panel discussions. I think that this program should be continued without a doubt.

Although I didn't particularly want to take up panel discussions, I felt that I was learning something about which I knew practically nothing. At the end of the semester I felt that I had learned something. . . . This semester I am in a class where we are using panels. I feel that I know something about them and I planned my work for the panel the way I was taught. However, I realized that the teacher herself actually knew very little about correct panel form and didn't expect us to. In other words, my information on panel discussion would have been put to use if the others in the panel and the teacher had expected it.

Only two students evinced a negative tone in their responses. One student out of the sixteen thought he could have learned more if the instructor had spent the time explaining civics material. He also indicated that the panel discussion instruction had not been put to any use since the civics course. Another student claimed that his attention was lost because of the "slowness in speaking" of the panels, but that since leaving the class the discussion instruction ". . . has helped me. Not so much in giving talks, but more in writing compositions."

In summary, then, both instructor and student reaction to the use of problem-solving panel discussion as a teaching technique in civics classes was largely favorable. The writers would agree with Student No. 2, cited earlier, that low ability homogeneous groups would not make good use of this technique. It does appear to be profitable for mixed ability groupings, especially, and for upper ability groups also.

The problem-solving discussion-civics combination has much to recommend it. While not a substitute for a required course in speech, the approach is particularly valuable in high schools which do not otherwise provide required instruction in group discussion. Civics courses are generally required in all high schools.

REFERENCES

1. Phelps, Waldo and Anderson, Martin P. "Discussion in Secondary School Social Science Classes," *California Journal of Secondary Education*, 29 (November, 1954) 373-377.
2. Peters, Charles C. and Van Voorhis, Walter R. *Statistical Procedures and Their Mathematical Bases*. New York: McGraw-Hill Book Company, Inc., 1950. Pp 449-50.

Maternity Leave Policies in Cities Over 200,000

WARD M. NICHOLS

Last year, the San Francisco Public Schools granted a maternity leave for the school year 1955-56 to one of its elementary teachers and shortly after having granted the leave, learned that the teacher in question had been given a teaching contract by a small school district in the southern part of the state. The question immediately was raised as to whether or not it was ethical and proper for the teacher to have accepted a contract while on leave from the San Francisco Schools, and whether or not there was anything the school district could do to terminate her services.

In view of the fact that the teacher had been placed on leave of absence in accordance with the maternity leave requirements in this district, it was our opinion that there were no legal grounds for terminating the teacher's services. The local Board of Education thereupon suggested that maternity leave policies in effect in this district be re-examined and that, if necessary, more realistic policies be adopted.

Before revising our regulations, we desired information concerning maternity leave policies in effect elsewhere and accordingly, our Superintendent requested superintendents of 55 of the major cities in the country to send us copies of, or statements concerning, maternity leave policies in effect in their respective cities. Fifty-three replies to this letter were received. In view of the fact that statements of policy were requested rather than the completion of a questionnaire, each of these statements had to be analyzed carefully in order to secure the information desired

For the past seven years, Ward M. Nichols has been Personnel Coordinator for the San Francisco City Schools. After four years at Modesto High School he came to San Francisco City College in 1935. He was in the Navy from 1942 to 1945 and managed the San Francisco Veterans' Counseling Center from 1945 to 1948. He served as special assistant to the Superintendent of San Francisco City Schools in 1948 and 1949. This article is based on research done for the San Francisco Unified School District.

and it is possible, of course, that minor errors in interpretation were made. Furthermore, not all of these statements can be tabulated nor presented statistically.

It is also true, as indicated by at least one correspondent, that administrative practice in certain cities may depart from usual policy when the necessity arises. Nevertheless, the replies received have been very helpful to this district in recommending possible revisions in our maternity leave regulations.

It is interesting to note that two cities do not grant maternity leaves and require resignations in the event of pregnancies. One other city employs no married women as teachers, so that there are 50 replies to consider in this report.

Advance Notice

No specific amount of advance notice of maternity leave is required in San Francisco, and Table I reports requirements in this regard in the other cities of the country. For example, as indicated in Table I, nine cities require the teacher anticipating maternity leave to notify the school district of her condition at least one month before the effective date of the leave of absence.

TABLE I

Amount of Advance Notice Required Concerning Maternity Leaves

<i>Notice Required</i>	<i>Number of Cities</i>
No advance notice specified.....	36
One month or more of notice required.....	9
One-half month of notice required.....	3
As soon as pregnancy is known*	2
Total.....	50

*See Table II

Length of Pre-Natal Leave

San Francisco has required the teacher to absent herself during a period of six months before, and six months following, the birth of the child, and in no case would the leave be less than one year. There has been some objection to requiring a six months' absence before the child's birth, and there has been occasional evasion of the requirement. It is interesting, therefore, in this connection to note that, as shown in Table II, approximately half of the cities responding require either four or five months of

leave before the date of confinement and approximately another 20-25 per cent require even less advance notice.

TABLE II
Minimum Absence Required Before Childbirth

<i>Minimum Absence Required</i>	<i>Number of Cities</i>
2 Months	3
3 Months	7
4-4½ Months	12
4-6 Months	1
5 Months	13
6 Months	7
Forthwith on receipt of notice of pregnancy*.....	2
Discretion of superior.....	2
Not stated	3
Total.....	50

*See Table I

Length of Maternity Leave

Table III, on page 19, summarizes the practices in granting maternity leave. Many cities specify, in granting leaves, the length of time the teacher must be absent and then, if circumstances justify the action, may permit the abridgment of the leave at an earlier date. The exceptions to these general practices are not noted in this table, but are presented in a later section of this report (See table V). In other cities the length of time the teacher must absent herself is stated only in terms of "not to exceed" a given period of time. In these cases the leave will run to the maximum period but may be abridged at the request of the teacher when recommended by a physician and approved by the school district.

Maximum Leave for One Pregnancy

San Francisco permits a leave of absence for child care immediately following a maternity leave in the event the teacher has requested it. The practice of other cities in this regard, therefore, is of major interest. Table IV (page 20) indicates the maximum period of absence which may be granted to a teacher in connection with any one pregnancy. In this table it

TABLE III
Practices Concerning Length of Maternity Leave
(Subject to Amendment)

Duration	Number of Cities
Specified Duration:	
3 Months or less, plus the pre-natal leave period.....	4
6-9 Months, plus the pre-natal period, plus the remainder of the term in which the leave expires.....	2
8-9 Months, plus the pre-natal leave period.....	2
To the end of the school year in which the child is born.....	1
11-12 Months	11
1 Year, plus pre-natal leave period.....	9
1 Year, plus pre-natal leave period, plus the remainder of the term in which the leave expires.....	2
1 Year, plus the remainder of the term following the expiration of leave	4
1½-2 Years	5
Leave Not to Exceed:	
1 Year, plus pre-natal leave.....	1
1½ Years	1
2 Years	3
3 Years	1
6 Years	1
Not stated	3
Total.....	50

is observed that 23 of the 34 cities for which replies were tabulated permit two or more years of leave in connection with any one pregnancy. No replies were tabulated for 16 cities which, if one can read between the lines, probably allow only the maternity leave originally granted and such leave is not subject to extension.

Initial and Terminal Dates

Teachers absenting themselves on maternity leave after the opening of any semester, or returning to duty during the course of any semester, create problems of pupil reaction and teacher replacement. Other cities' practices in this regard are of interest to San Francisco. Only three cities have included in their stated policies any attempt to control the beginning date of the maternity leave, and these cities have suggested to their teachers that they should not begin any semester after becoming pregnant. How-

TABLE IV
Maximum Leave for One Pregnancy

	Maximum Leave	Number of Cities
6 Years	1	
3 Years, or 3 years plus pre-natal leave.....	3	
2½ Years	1	
2 Years, plus pre-natal leave, plus the remainder of the term in which the leave expires	1	
2 Years, plus pre-natal leave.....	4	
2 Years, plus the remainder of the term in which the leave expires.....	1	
2 Years	12	
1½ Years	2	
1 Year, plus pre-natal leave.....	3	
1 Year, plus the remainder of the term in which the leave expires.....	1	
1 Year	5	
Not stated	16	
 Total.....	 50	

ever, 34 cities, or 86 per cent of those reporting, include in their rules concerning maternity leave some provision for terminating the leave at the end of a term or permit school district officials, with guidance from physicians, to adjust the termination date of the leave. By adjusting the termination date forward or backward the teacher is permitted to return to duty only at the beginning of a term.

In San Francisco, teachers absenting themselves on maternity leave in mid-October are entitled to return at the same time the following year. This practice results in the interruption of the class twice, once at the beginning of the leave and again at the termination of the leave. Attention will likely be given to correcting this situation.

Salary Provisions During Leave

Only one city makes any salary allowance during a maternity leave period. In that instance, the city pays any accrued sick leave benefits acquired by the teacher. One other city which pays no sick leave benefit allows increment credit upon the return of the teacher to duty, providing that return is made within a two-year period.

Length of Post-Natal Leave

At a time of teacher shortage the length of time that the teacher is required to absent herself becomes of concern. Statements concerning the minimum period of leave required after the child's birth, therefore, are important. It is specifically stated in most cases, and implied in others, that a physician's recommendation is required in any case where the standard maternity leave period is abridged. Table V indicates the shortest periods of absence which are required before the teacher may return to duty. Eight school systems have no specific requirements on this point and, presumably, would permit the teacher to return at any time she requested, provided that the attending physician or medical examiner for the school district, and the school authorities approve.

TABLE V
Minimum Length of Leave Required After Childbirth

<i>Minimum Length Provision</i>	<i>Number of Cities</i>
Discretionary with school district and medical recommendation.....	8
4 Months or less.....	6
Beginning of any semester.....	2
6 Months plus the remainder of the term.....	1
1 Year	1
Total.....	18

Limitations on Successive Maternity Leaves

There have been instances in San Francisco in past years of individuals who by reason of successive pregnancies and child care leaves have been absent from duty for a total period of six to eight years. There have been some reservations about the professional fitness of these teachers upon returning to duty after such extended absences. However, only seven of the reporting cities indicate any attempt to limit the total period of absence and their limitations seem rather generous. One city permits two consecutive pregnancies but each of these might involve absences of two and one-half years so that the total time in this case would be approximately five years. Two others allow absences of three successive years, one of four years, two of five years, and one of eight years. It appears, however, that all of these have escape clauses which permit reappointment after the resignation or dismissal of the teacher, providing the teacher qualifies for service by examination or otherwise.

The frequency with which other cities follow a given practice does

not necessarily reflect the desirability of that practice. Local traditions and employment conditions differ widely and this probably accounts for the wide variance in the practices reported. In studying this report, one should look for those practices which seem to constitute improvement over local practices rather than merely to adopt those practices most frequently reported.

New San Francisco Regulations Adopted

The foregoing study of maternity leave policies was presented to the Personnel Committee of the San Francisco Public Schools, the membership of which includes the assistant superintendents in charge of each of the instructional divisions, the Personnel Coordinator, and the Legal Adviser. This committee studied the report and prepared a suggested maternity leave policy for presentation to the Superintendent. This suggested statement of policy was then referred by the Superintendent to his Administrative Council, a group made up of representatives of each of the major teacher and administrator organizations. The Council discussed the matter further, suggested a minor change in the proposal, and recommended the following statement of maternity leave policy. This statement of policy, upon recommendation by our Superintendent, was formally adopted by the San Francisco Board of Education:

RESOLVED: That a married certificated employee shall absent herself from duty for a period of at least three months before the anticipated birth of her child and for six months following the estimated date of birth, except that if such six-month period terminates within six weeks of the end of a semester, such leave shall extend to the end of the semester. If the maternity leave expires within one month following the opening of any semester, the teacher may request abridgment of leave, effective the opening day of the semester and such abridgment of leave may be approved providing the attending physician recommends such abridgment. In case of miscarriage or death of the child, the leave of absence for maternity may be abridged at the beginning of any semester upon the recommendation of the Superintendent of Schools and the approval of the Board of Education, provided that a health certificate from the medical examiner of the Board of Education states that the teacher is physically and mentally able to resume her duties.

BE IT FURTHER RESOLVED: That immediately following the termination of the maternity leave, and upon request of the certificated employee, an extension of the leave of absence for a period of not more than one school year shall be granted for the care of the infant.

These new maternity leave policies have been in effect only since December 6, 1955, and it is still too soon to appraise the effects of the new policy. However, teacher reaction, thus far, seems to indicate satisfaction with the new regulations.

Comparison of IQ's Derived from Two Different Tests

PHILIP G. NASH

In a study conducted in the fall of 1954 and the spring of 1955, a comparison was made of the intelligence quotients of Los Angeles B-1 pupils derived from two tests: the *Detroit Beginning First Grade Intelligence Test* and the *Kuhlmann-Anderson K Intelligence Test*.¹ This study furnished evidence that there were large differences in the mean I.Q.'s and the standard deviations derived from the two tests when the tests were administered to relatively large numbers of comparable but not identical pupils. The findings of this study also apparently indicated that the *Detroit Beginning* test yields I.Q.'s that are spuriously high.

The fact that both tests were not administered to the same pupils made it difficult to draw definitive conclusions from the study. The administrative problems that made such a procedure impossible at the time of the first study were resolved by the spring of 1956, and the present study is an evaluation of the results of testing the same B-1 pupils with the two intelligence tests.

Procedure

Special data sheets were sent to a selected number of teachers of beginning first grade pupils. These data sheets provided spaces for listing the pupils' initials, birth dates, the I.Q.'s derived from the *Kuhlmann-Anderson K Intelligence Test* and the I.Q.'s derived from the *Detroit Beginning First Grade Intelligence Test*.

Fifteen schools participated in the study and data for 361 B-1 pupils were returned from these schools. All five geographical areas of the Los Angeles City School District were represented in the study.

¹ Howard A. Bowman, "Problems Associated with Intelligence Testing in a Large City School District," *California Journal of Educational Research*, VII: 6-14, January, 1956.

Philip G. Nash is a coordinator in the Evaluation and Research Section of the Los Angeles City Schools. He has been in this position for three years, and he has also had seven years experience as a junior high school teacher. He obtained his master's degree from the University of Southern California in 1933.

not necessarily reflect the desirability of that practice. Local traditions and employment conditions differ widely and this probably accounts for the wide variance in the practices reported. In studying this report, one should look for those practices which seem to constitute improvement over local practices rather than merely to adopt those practices most frequently reported.

New San Francisco Regulations Adopted

The foregoing study of maternity leave policies was presented to the Personnel Committee of the San Francisco Public Schools, the membership of which includes the assistant superintendents in charge of each of the instructional divisions, the Personnel Coordinator, and the Legal Adviser. This committee studied the report and prepared a suggested maternity leave policy for presentation to the Superintendent. This suggested statement of policy was then referred by the Superintendent to his Administrative Council, a group made up of representatives of each of the major teacher and administrator organizations. The Council discussed the matter further, suggested a minor change in the proposal, and recommended the following statement of maternity leave policy. This statement of policy, upon recommendation by our Superintendent, was formally adopted by the San Francisco Board of Education:

RESOLVED: That a married certificated employee shall absent herself from duty for a period of at least three months before the anticipated birth of her child and for six months following the estimated date of birth, except that if such six-month period terminates within six weeks of the end of a semester, such leave shall extend to the end of the semester. If the maternity leave expires within one month following the opening of any semester, the teacher may request abridgment of leave, effective the opening day of the semester and such abridgment of leave may be approved providing the attending physician recommends such abridgment. In case of miscarriage or death of the child, the leave of absence for maternity may be abridged at the beginning of any semester upon the recommendation of the Superintendent of Schools and the approval of the Board of Education, provided that a health certificate from the medical examiner of the Board of Education states that the teacher is physically and mentally able to resume her duties.

BE IT FURTHER RESOLVED: That immediately following the termination of the maternity leave, and upon request of the certificated employee, an extension of the leave of absence for a period of not more than one school year shall be granted for the care of the infant.

These new maternity leave policies have been in effect only since December 6, 1955, and it is still too soon to appraise the effects of the new policy. However, teacher reaction, thus far, seems to indicate satisfaction with the new regulations.

Comparison of IQ's Derived from Two Different Tests

PHILIP G. NASH

In a study conducted in the fall of 1954 and the spring of 1955, a comparison was made of the intelligence quotients of Los Angeles B-1 pupils derived from two tests: the *Detroit Beginning First Grade Intelligence Test* and the *Kuhlmann-Anderson K Intelligence Test*.¹ This study furnished evidence that there were large differences in the mean I.Q.'s and the standard deviations derived from the two tests when the tests were administered to relatively large numbers of comparable but not identical pupils. The findings of this study also apparently indicated that the *Detroit Beginning* test yields I.Q.'s that are spuriously high.

The fact that both tests were not administered to the same pupils made it difficult to draw definitive conclusions from the study. The administrative problems that made such a procedure impossible at the time of the first study were resolved by the spring of 1956, and the present study is an evaluation of the results of testing the same B-1 pupils with the two intelligence tests.

Procedure

Special data sheets were sent to a selected number of teachers of beginning first grade pupils. These data sheets provided spaces for listing the pupils' initials, birth dates, the I.Q.'s derived from the *Kuhlmann-Anderson K Intelligence Test* and the I.Q.'s derived from the *Detroit Beginning First Grade Intelligence Test*.

Fifteen schools participated in the study and data for 361 B-1 pupils were returned from these schools. All five geographical areas of the Los Angeles City School District were represented in the study.

¹ Howard A. Bowman, "Problems Associated with Intelligence Testing in a Large City School District," *California Journal of Educational Research*, VII: 6-14, January, 1956.

Philip G. Nash is a coordinator in the Evaluation and Research Section of the Los Angeles City Schools. He has been in this position for three years, and he has also had seven years experience as a junior high school teacher. He obtained his master's degree from the University of Southern California in 1933.

Difference in the Mean IQ's

Table I presents the mean I.Q.'s (M) for the sample of 361 B-1 pupils derived from both the *Detroit Beginning First Grade Intelligence Test* and the *Kuhlmann-Anderson K Intelligence Test*, the standard deviations (SD) of the I.Q.'s obtained from the two tests, the product-moment coefficient of correlation (*r*) between the I.Q.'s obtained on the two tests, the difference between the mean I.Q.'s, the difference between the standard deviations, the critical ratios (*t*) derived from these differences, and significance of the differences (*P*) of both the means and the standard deviations.

TABLE I

A Comparison of the Intelligence Quotients
Derived from the Detroit Beginning First Grade Intelligence Test and
Those Derived from the Kuhlmann-Anderson K Intelligence Test

	<i>M</i> <i>IQ</i>	<i>SD</i>	<i>r</i>	<i>M</i> ₁ - <i>M</i> ₂	<i>SD</i> ₁ - <i>SD</i> ₂	<i>t</i> _{<i>M</i> ₁ - <i>M</i> ₂}	<i>P</i> _{<i>M</i> ₁ - <i>M</i> ₂}	<i>t</i> _{<i>SD</i> ₁ - <i>SD</i> ₂}	<i>P</i> _{<i>SD</i> ₁ - <i>SD</i> ₂}
D*	113.12	14.85							
K†	105.69	9.53	.63	7.43	5.32	12.22	.01	12.37	.01

* Detroit Beginning

† Kuhlmann-Anderson

Generally, the two tests showed large differences in their measurement of intelligence of these B-1 pupils. The mean I.Q. derived from the *Kuhlmann-Anderson K* scores was 105.69 as compared with a mean I.Q. of 113.12 derived from the *Detroit Beginning* scores. The critical ratio obtained for this difference of 7.43 I.Q. points was 12.22, which would indicate that the two means differed by a highly significant margin.

It may be noted that the *Kuhlmann-Anderson K* mean is roughly one-half a standard deviation above the "normal" I.Q. mean of 100, and the *Detroit Beginning* mean is almost one full standard deviation above the "normal" mean. It would appear that the 361 pupils in this sample were somewhat above average in intelligence as compared with the general population.

In the fall of 1954 the mean I.Q. derived from the *Detroit Beginning* test was 5.88 points higher than the mean I.Q. derived from the *Kuhlmann-Anderson K* test for comparable but not identical pupils. In the spring of

1955 the *Detroit Beginning* mean was 6.51 points higher than the *Kuhlmann-Anderson K* mean for comparable pupils. These differences show a reasonable degree of consistency with the difference of 7.43 I.Q. points obtained in this study in the spring of 1956 for 361 identical pupils.

Table II compares the mean I.Q.'s derived from the *Kuhlmann-Anderson K* test and the *Detroit Beginning* test for two groups of pupils selected according to intelligence levels from the original sample of 361 B-1 pupils: (1) those with I.Q.'s of 111 and above as measured by the *Kuhlmann-Anderson K* test, herein called the "superior I.Q. group," and (2) those with I.Q.'s of 100 and below as measured by the *Kuhlmann-Anderson K* test, herein called the "average I.Q. group." There were 120 pupils in the superior I.Q. group and 86 pupils in the average I.Q. group.

TABLE II

A Comparison of Intelligence Quotients Derived from the Detroit Beginning First Grade Intelligence Test and Those Derived from the Kuhlmann-Anderson K Intelligence Test for Pupils of Superior IQ and Pupils of Average IQ

Group	Number of Pupils	Mean IQ Kuhlmann- Anderson K	Mean IQ <i>Detroit Beginning</i>	Difference in Mean IQ's
Pupils of Superior IQ*	120	115.03	121.39	6.36
Pupils of Average IQ†	86	92.63	99.65	7.02

* I.Q.'s of 111 and above on *Kuhlmann-Anderson K* Test.

† I.Q.'s of 100 and below on *Kuhlmann-Anderson K* Test.

For the superior group the mean I.Q. derived from the *Detroit Beginning* test was 121.39 or 6.36 I.Q. points higher than the mean I.Q. of 115.03 derived from the *Kuhlmann-Anderson K* test. For the average group the mean I.Q. derived from the *Detroit Beginning* test was 99.65 or 7.02 I.Q. points higher than the mean I.Q. of 92.63 derived from the *Kuhlmann-Anderson K* test. These differences in I.Q. are reasonably consistent with the 7.43 I.Q. point difference for the total sample of 361. The findings apparently indicate that pupils at all levels of intelligence obtain consistently higher I.Q.'s when tested with the *Detroit Beginning* test than when tested with the *Kuhlmann-Anderson K* test.

Difference in Standard Deviations

A comparison of the standard deviations of the I.Q.'s derived from these two tests indicates that there is a much larger dispersion of I.Q.'s obtained from the *Detroit Beginning* test than of those obtained from the *Kuhlmann-*

Anderson K test (see Table I). A standard deviation of 14.85 was obtained for the *Detroit Beginning I.Q.*'s whereas the *Kuhlmann-Anderson K* I.Q.'s yielded a standard deviation of 9.53. The critical ratio obtained for this difference of 5.32 I.Q. points was 12.37, which would indicate that the two standard deviations differed by a very significant margin.

Correlation Between the Two Tests

The coefficient of correlation between the I.Q.'s derived from the *Detroit Beginning* test and those derived from the *Kuhlmann-Anderson K* test for the 361 pupils in the sample yielded a value of .63. This relatively low correlation may indicate that the two tests do not measure exactly the same intelligence factors. The fact that beginning first grade intelligence tests must necessarily contain a minimum of verbal material would tend to make high correlations difficult to obtain.

Conclusions

1. Beginning first grade pupils of all levels of intelligence obtain significantly higher I.Q.'s when measured by the *Detroit Beginning First Grade Intelligence Test* than when measured by the *Kuhlmann-Anderson K Intelligence Test*.
2. There is a significantly greater dispersion for I.Q.'s derived from the *Detroit Beginning* test than for those derived from the *Kuhlmann-Anderson K Test*, the standard deviation of the former being approximately one-half larger than the standard deviation of the latter.
3. The correlation (*r*) between the I.Q.'s derived from the two tests was .63, which may indicate that the two tests do not measure exactly the same intelligence factors.
4. To the degree that the earlier study mentioned may be taken as disclosing mean I.Q.'s of large populations, the I.Q.'s derived from the *Detroit Beginning First Grade Intelligence Test* may be considered to be spuriously high. A recent study of 42 kindergarten children in Lancaster, Pennsylvania, apparently substantiates this conclusion.² In this study the mean I.Q. derived from the *Detroit Beginning* test was reported as being nearly 13 points higher than the mean I.Q. derived from the *Revised Stanford-Binet Intelligence Scale*.

² Edith R. Eshleman, "Detroit Beginning First Grade Test Compared with Stanford-Binet," *Journal of Educational Research*, XLIX: 543-546, March, 1956.

Governing Board Policy Handbooks in Non-City Elementary Districts

DICKEY L. MITCHELL, JR.

For many years the policy enactments of the governing boards of school districts have appeared only in the minutes of the meetings of these boards. As the school population of California has grown and the duties of governing boards and administrators of school districts have become more and more detailed and complex, there has developed a trend toward compilation of policies in the form of a manual or handbook.

Comments made by certified public accountant firms auditing the books of school districts in the Bay Area in recent years have often included a recommendation that the policies of the governing boards be compiled in handbook form. This recommendation of the auditors, followed by discussions with administrators in Contra Costa County, provided the initial suggestion for a study of the present status of handbook compilation in the non-city elementary districts of the state. It was felt that a survey of the present situation and experiences of the districts which have done this job would be helpful to others who are now engaged or expect to engage in such development.

The literature in general indicates the desirability of policy handbooks. Smith and Smittle (5) reported several studies describing the virtues of codification, which they sum up as being:

1. Clarification of staff responsibilities.
2. Elimination of rehashing settled issues.
3. Orientation of new board members and staff personnel.
4. Greater efficiency of administration.

Dickey L. Mitchell, Jr., is Principal of Port Costa School, Port Costa, California. He has been on this job for nine years. This article is based on his master's seminar study. He was awarded the degree in 1956 by the University of California at Berkeley.

Florell (3) points out the greater stability and consistency of administration where a handbook exists. Both Florell (2) and Rand and Stafford (4) indicate the common practice of including procedural regulations along with policy statements in many handbooks. Some recent articles pertain to methods of drawing up handbooks. Bixby and Hirst (1) recommend starting with minutes of the board and revising and editing them to bring them up to date and eliminate conflict. Most writers emphasize participation of all those who will use the handbooks and the leadership role of the superintendent in formulation of the handbook.

Procedure of This Survey

The study sought answers to three basic questions, namely:

1. What are the policies which governing boards include in their handbooks?
2. Who are provided with handbooks to assist them in carrying out their functions in school and community?
3. Are handbooks of real value to board members and professional and lay personnel?

Only non-city, elementary, joint elementary, and union elementary districts in California were included in the investigation. Because no attempt was made to determine the percentage of total districts which had policy handbooks, questionnaires were sent to districts in only 19 counties excluding Los Angeles and San Francisco. Only districts containing four or more schools were included unless prior inquiry indicated that the smaller districts did have handbooks.

Of the 102 questionnaires sent to selected superintendents there were 81 returns. Thirty-eight districts had handbooks of policies of which 23 sent copies which were included in the analysis of format and content. All of the 38 were included in the history and evaluation tabulations. It was significant that 26 of the 43 districts not having handbooks were engaged in developing one. In three of the counties represented, the office of the county superintendent of schools was assisting districts in such a development.

Only one of the 23 handbooks examined was adopted prior to 1953, which indicates the timeliness of the consideration of the subject. The handbooks carried a variety of names—some emphasizing the policy function and others stressing the administrative or procedural operations. Table I illustrates this variety of names given to the handbooks of the districts represented.

TABLE I
Names of Handbooks

<i>Official Name of Handbook*</i>	<i>Number of Cases</i>	<i>Per Cent</i>
Board Rules and Regulations	8	34.8
Policies and Regulations of the Board	3	13.0
Board Policies	3	13.0
Policies and Procedures Relating to the Board	2	8.7
Principals Handbook	1	4.3
Administrative Bulletin	1	4.3
Administrative Code	1	4.3
Administrative Manual	1	4.3
Statement of Policy Governing Administration	1	4.3
Guide to District Policies	1	4.3
Policies, Rules, and Regulations	1	4.3
Total	23	99.6

*Omitting such phrases as "of the Blank School District"

They also varied greatly in size, running from three to 97 pages in length and some had additional unnumbered pages of appendices. All were 8½" by 11" in size, looseleaf, and, in the majority of cases, bound in some kind of cover. Practically all were organized either by articles and sections or by coded section numbers as in accounting practice. Fourteen of the 23 had tables of contents.

Contents of Handbooks

In analyzing the contents of the handbooks, the most notable characteristic was the extreme variety of matters included in the various districts. Considering the differences in size, urban and rural areas, relative complexity or simplicity of organization within the districts, this variety was, no doubt, to be expected. There were also evident differences in the purpose of developing the handbook. Some districts included only basic policy statements, whereas others included considerable procedural details designed to implement the policies.

A statement of philosophy of education, rosters of board and administration, and description and history of the district were found in some of the handbooks. A rather thorough statement of the organization, functions, and responsibilities of the governing board itself was common to almost all handbooks even though the statement in part duplicated statutory provisions. Such an organizational outline would seem to be a chief

reason for the existence of a policy handbook. As shown by Table II, there was more agreement on items to be included in this area than in any other covered by the handbooks.

TABLE II
Contents of Handbooks—Organization and Functions of the Board

Item	Number of Cases	Per Cent
Membership of board, terms, elections	20	87.0
Meetings—regular and special	19	82.6
Agenda—order of business	17	73.9
General duties of board	17	73.9
Quorum, voting	16	69.6
Officers of board—duties, terms, election	15	65.2
Minutes—how kept and distributed	14	60.9
Committees—standing and special	12	52.2
Appeals of employees and patrons	9	39.1
Meetings open to public (exceptions)	8	34.8
Employment of chief executive of district	8	34.8
Code of ethics or creed	6	26.1
Amendment of policies—procedure	5	21.7
Individual responsibilities of members	4	17.4
Membership in School Boards Association	2	8.7
Calendar of regular duties	1	4.3

Two other important categories of provisions are those pertaining to curriculum and teaching procedures and pupils. These include such topics as promotions, reporting to parents, and consultant, audio-visual library, and other special services. Discipline, pupil health and safety, and attendance and records are commonly treated. In fewer cases special education for exceptional children, evaluation, and research and experimentation are provided for.

Swanson (7) and others have stated that one of the principal aims to be achieved by the policy handbook is the clarification of duties, position, and responsibilities of staff personnel—especially the superintendent, who is not only the chief administrator but also the secretary to the governing board. For this reason the duties and responsibilities of staff personnel, both certificated and classified, are treated quite fully. Matters of employment, tenure, leaves of absence, retirement, and vacations are included in most of the handbooks.

Business policies are not considered very extensively, only the question of insurance being found in more than half of the handbooks studied.

Matters of auditing, accounting, purchases, and transportation and cafeteria management are also found in some handbooks. In the area of community relations the only statements found in a majority of cases have to do with use of school plant and facilities by community groups under the Civic Center provisions of the Education Code.

The usefulness of the handbook to school personnel is indicated by Table III. Of particular interest to public-relations-minded educators is the considerable distribution of copies of the handbook to community leaders and to other lay people on request which is shown in this table.

TABLE III
Provisions for Distribution of Handbooks
 (as reported by 38 districts)

<i>Type of Personnel</i>	<i>Type of Distribution</i>		
	<i>Complete Handbook Provided Without Request</i>	<i>Pertinent Sections On Request</i>	<i>Provided Regularly</i>
Superintendent	38		
Board members	38		
Principals	35		
Supervisors	24	1	3
Teachers*	21	1	3
Other certificated	17	1	3
Community leaders	10	2	3
Non-certificated	4		
Teachers' club	1		
Neighboring districts	1		
County superintendent	1		
Citizens Advisory Committee members		1	
Other lay people		24	3†
Others	5		2

*Three additional districts provide handbooks for teachers only on a loan basis.

†On request only.

In evaluating the handbooks the opinions of the superintendents were obtained by questionnaires. It was their opinion that board members found them of value in:

1. Reducing discussions of already settled matters.
2. Supporting decisions.
3. Orienting new members.

All of the superintendents found the handbooks of value in their administration of district affairs. They further felt that they were helpful to district personnel in understanding their duties and responsibilities. Although not all districts supplied copies to laymen, 27 superintendents (all who answered the item) felt that they were appreciated by those who received them.

Conclusions

Since this was a survey type of study, most of the findings are contained in the body of the report. However, some comments and observations may be appropriate.

It was found that the three aims of handbooks outlined by the California Association of School Administrators (6) were substantially met by the sample obtained. The handbook should:

1. Provide for the organization and functioning of the board;
2. Outline the function, scope, and relationships of each position;
3. Cover situations where consistency of treatment is to be desired.

The analysis of the 23 handbooks examined in this study indicates the desirability of certain general classifications and sections of policy statements. It may be that other items would be included in a "perfect" handbook, but the experience of the districts clearly indicates that at least the following is needed:

- I. Background and philosophy of the district
 1. Organization chart
 2. Description and history
 3. Educational purposes
- II. Organization and functions of the board
 1. Membership, terms, and election of members
 2. Meetings, order of business, and minutes
 3. Committees, quorum, and voting
 4. General duties of the board
- III. Curriculum and instruction
 1. Services available to the district
 2. Promotional philosophy
 3. Reporting to parents
 4. Definition of school term and day
 5. Teaching in designated areas
- IV. Pupils
 1. Pupil accounting
 2. Pupil conduct
 3. Special education
 4. Transportation
 5. Pupil safety, protection, and health
 6. Guidance
- V. Certificated personnel
 1. Employment
 2. Duties
 3. Tenure
 4. Retirement

- 5. Leaves
- 6. Salary schedules
- VI. Non-certificated personnel
 - 1. Employment
 - 2. Duties
 - 3. Leaves and vacations
- VII. Business
 - 1. Budget preparation, approval, and operation
 - 2. Accounting
 - 3. Auditing
 - 4. Purchasing
 - 5. Stock and inventory control
 - 6. Maintenance and operation
 - 8. Cafeteria management
 - 8. Transportation
 - 9. Insurance
- VIII. Community relations
 - 1. Civic center use of plant and facilities
 - 2. Recreation participation
 - 3. Co-operation with lay organizations

It is worthy of note that curriculum matters are not covered in detail in the handbooks examined. Curriculum is considered to be the province of professional educators and it is apparent that governing boards agree that superintendents and their staffs are responsible for this aspect of education and competent in handling it.

The above eight categories of policies are general and each district must adapt any framework to its own particular situation and needs. It is hoped that the experience of the districts whose handbooks were analyzed here may be of value to others in the development and adoption of handbooks suitable to their own needs.

BIBLIOGRAPHY

1. Bixby, A. P. and Hirst, E. "Procedures for Compiling Board Policies," *Nation's Schools*, 53: 83-5, May 1954.
2. Florell, David M. "California School Administrative Codes—Their Contents," *California Journal of Educational Research*, 1: 111-14, May 1950.
3. Florell, David M. "California School Administrative Codes—Their Use and Format," *California Journal of Educational Research*, 1: 80-4, March 1950.
4. Rand, M. J. and Stafford, R. "Compile Board Decisions Into a Policy-Procedural Guide," illustrated, *School Executive*, 73: 68-9, October 1953.
5. Smith, Max S. and Smittle, W. Roy. *The Board of Education and Educational Policy Development*. Ann Arbor, Michigan: J. W. Edwards Publisher, 1954. Pp. 110.
6. California Association of School Administrators. *A Study of Board Rules and Regulations for Non-City School Districts with Superintendents in California* (Research in Administration, No. 6). Pasadena: the Association, March 1953.
7. Swanson, J. Chester. "Community, Schoolboard, Superintendent, Staff," *National Education Association Journal*, 45: 76-7, February 1956.

Factors Related to Vocabulary Size

DELWYN G. SCHUBERT

It has been discovered that the most important sub-test of the Stanford-Binet Intelligence Scale is the one involving vocabulary. It correlates more highly with the total test score than any other sub-test. From this and other evidence there is no doubt that a student's vocabulary is basic to his success in almost all intellectual endeavors. Until a student is conversant with basic meaning in science, history, mathematics, etc., he cannot read the literature in these areas with adequate understanding.

It is true that an individual might know all the words in a sentence and yet fail to grasp the meaning of it. However, the vast hierarchy of reading skills catalogued by specialists in reading — finding central thoughts of paragraphs, anticipating outcomes, reading critically, etc. — is still contingent on an understanding of the meaning of printed symbols.

In an attempt to gain insight into factors related to poor and good vocabularies, the author gave the vocabulary section of the *Minnesota Reading Examinations for College Students, Form A* to one hundred Los Angeles State College students who were enrolled in his classes during the fall semester of 1955. Immediately prior to the administration of this test, however, a questionnaire was given to the students which related to factors that could have a bearing on vocabulary development. To encourage truthfulness of response, both questionnaire and test paper remained anonymous.

After evaluation of the test papers, a quartile division was made on the basis of raw scores. The questionnaires accompanying papers in the upper quartile then were compared with those accompanying papers in the lowest quartile. The criterion of significance for differences in the responses of these two groups as they concerned various questionnaire items was determined by using chi-square with a P of .05 or less. Table I shows those items on which the upper and lower quartile groups differed significantly. The items for which there appeared no significant differences between the good and poor vocabulary groups were:

1. Was another language spoken in your home when you were a child?
2. Do you speak another language?
3. Have you studied Latin?
4. Do you feel competent in the use of the dictionary?

Delwyn G. Schubert is Assistant Professor of Education and Director of the Reading Clinic at Los Angeles State College of Applied Arts and Sciences. Before coming to this post six years ago he had experience as a high school teacher in Wisconsin and as an assistant at Northwestern University. He received the doctor of philosophy degree from Northwestern in 1949.

TABLE I

**Items for Which There Appeared Significant Differences Between
Good and Poor Vocabulary Groups**

Item	Answered Affirmatively More Often By	
	Upper Q Group (N 25)	Lower Q Group (N 25)
1. In comparison with an average student of your grade status, do you feel your reading vocabulary is below average?		X
2. Are you satisfied with your reading vocabulary?	X	
3. Do you enjoy reading for pleasure?	X	
4. Do you enjoy using the dictionary?	X	
5. Is your grade point average in excess of "B"?	X	

Item one in Table I indicates that college students with poor vocabularies are aware of their inadequacy. This may not be intuitive, however, but is probably based on knowledge of vocabulary test results given in other college courses. Sometimes, too, students are given the results of test batteries taken as part of college entrance requirements.

Closely related to an awareness of vocabulary weakness or strength is satisfaction with one's reading vocabulary. This is evidenced by the fact that students in the upper quartile group expressed satisfaction with their reading vocabulary far more often than did those in the lowest quartile.

Items three and four corroborate the contention of authorities that the best way to build one's reading vocabulary is to read widely with an insatiable curiosity in new words. It appears that college students with poor reading vocabularies do not, as a group, enjoy reading for pleasure and probably demonstrate no penchant for dictionary usage.

Item five highlights a relationship between vocabulary size and academic aptitude. Students with good vocabularies do better scholastically than those with poor ones.

In summary, we see that within the limitations of this study college students with superior vocabularies cannot be differentiated from those with poor ones on the basis of languages spoken in the home, knowledge of Latin, or feelings of competence in using the dictionary. On the other hand, college students with poor vocabularies tend to be aware of their shortcomings and one can conclude that there should be relatively little need for college teachers to make a concerted effort to bring the matter to their attention. Since this group of students does not like to read for pleasure there is a need to uncover and remove any factors inimical to recreatory reading. And, lastly, it would be advisable to encourage students with poor vocabularies to develop a real dictionary habit.

Relative Importance of Certain Competences for Secondary Music Teachers

FORREST J. BAIRD

The problem of the present study reported here was to determine the competences required of music teachers holding the Special Secondary Credential in Music and the effectiveness of the curriculum for training of music teachers in developing these competences in graduates of San Jose State College. The four-year, 124-semester-hour curriculum for the Baccalaureate degree with the Special Secondary Credential in Music at the College includes forty-five units of general education, twenty-five units of professional education, eight elective units, and forty-six units in the major field of music.

The California Music Educators Association Committee on Credentials for Teaching Music in Schools has recommended that sixty of the 124 units in the curriculum be allotted to music. Where the present forty-six unit major is maintained, they suggest a redistribution of music units as shown in Table I.

The competences examined were: (1) General education competences as formulated by faculty committees at San Jose State College, (2) Professional teaching competences as outlined in Kinney's *Measure of a Good Teacher*, (3) Music teaching competences listed in the California Administrative Code and in the literature and research for the area.

Follow-Up Procedures

Graduates who received the Special Secondary Credential in Music from San Jose State College for the period 1949-1953 and also the administrators who employed them rated on a five-point scale the importance of listed general education and professional teaching competences.

Forrest J. Baird is Assistant Professor of Music and Education at San Jose State College, where he has taught for the past ten years. He was previously a music teacher at Marysville High School for twelve years. This article is a digest of his doctoral dissertation for which he received the Ed. D. degree from Stanford University in 1955.

TABLE I
**Present and Recommended Distribution of Course Requirements in Music
 for Special Secondary Credentials**

<i>Course (or Subject Area)</i>	<i>Present California Requirements</i>	<i>Requirements Recommended by California Music Educators Association</i>
Music Theory	24 units	18 units
Music Literature	6 "	4 "
Orchestral Instruments	6 "	8 "
Conducting	2 "	4 "
Piano	4 "	4 "
Voice	4 "	4 "
Applied Music	0 "	4 "
Total	46 "	46 "

These same graduates and the San Jose State College music faculty judged the importance of music teaching competences that had been listed and the effectiveness of the curriculum in developing these competences. Response by groups was as shown in Table II.

TABLE II
Returns Received in Follow-Up Study

<i>Group</i>	<i>Questionnaires</i>		
	<i>Distributed</i>	<i>Returns Received</i>	<i>Per Cent Returned</i>
Graduates	73	61	83.6
Administrators	49	29	59.2
Music Faculty	20	19	95.0
Totals	142	109	76.6

Numerical values from one to five were assigned to each of the five categories of importance and effectiveness and mean scores calculated. General education mean scores concerning competence importance were 4.1 for graduates and 4.2 for administrators. Concerning curriculum effectiveness general education mean scores were 3.4 for graduates and 3.7

for administrators. The difference between competence importance and curriculum effectiveness for both graduates and administrators was significant at the 1 per cent level.

Results of a combination of judgments by graduates and administrators of the importance to music teachers of the general education competences listed are given in Table III.

TABLE III
Composite Rankings by Graduates and Administrators on Importance to Music Teachers of General Education Competences

<i>Rank Order</i>	<i>Professional Education Competences</i>	<i>Mean Score</i>
1.	Respect the values of others	4.8
2.	Communicate effectively	4.5
4.	Appreciate the creative work of others	4.4
4.	Establish acceptable values to live by	4.4
4.	Accept responsibility to make a contribution to society	4.4
6.	Make wise choices through reflective thinking in personal and social conduct	4.3
7.	Seek opportunities to participate in creative activities	4.2
8.	Respect the law and democratic processes	4.1

At the end of each section of the questionnaire participants in the study were asked: "Should these competences receive more or less emphasis in the curriculum?" Forty-six of the 61 graduates replying said they should receive more emphasis, while five said the emphasis should be less, and ten made no response. Of the 29 administrators responding twenty-four favored more emphasis and five made no response.

No provision was made to allow those who thought the present emphasis to be correct and adequate to indicate this. As it stands, "no response" might indicate satisfaction with the present emphasis, indecision, or unwillingness on the part of the participant to commit himself; however, there seems to be strong support for more emphasis on general education competences in the teacher training curriculum at San Jose State College.

Professional teaching competence mean score results concerning competence importance were 4.1 for graduates and 4.2 for administrators. Concerning curriculum effectiveness mean scores were 3.4 for graduates and 3.7 for administrators. The differences between competence importance and curriculum effectiveness for both graduates and administrators were significant at the 1 per cent level.

Composite rank order of importance to music teachers of professional teaching competences as judged by graduates and administrators is given in Table IV.

TABLE IV

Composite Rankings by Graduates and Administrators on Importance to Music Teachers of Professional Education Competences

<i>Rank Order</i>	<i>Professional Education Competences</i>	<i>Mean Score</i>
1.	Develop an understanding of the wide significance of his subject matter	4.6
2.5	Demonstrate effective instructional techniques	4.5
2.5	Maintain acceptable social standards	4.5
4.5	Interpret the school to the community	4.4
4.5	Build a music curriculum based upon cooperative planning by school and community	4.4
7.	Reveal a sense of responsibility for his share in the effectiveness of the school	4.3
7.	Maintain an effective balance between freedom and security in musical activities	4.3
7.	Demonstrate an appreciation of the social importance of the teaching profession	4.3
10.5	Understand the business aspects of music education	4.2
10.5	Provide leadership in the cultural activities of the school	4.2
10.5	Adapt principles of child development and mental hygiene to individual and group guidance	4.2
10.5	Be acquainted with the ways music may contribute to the desired outcomes of education	4.2
13.	Be familiar with available instructional tools	4.1
14.5	Use diagnostic and remedial procedures effectively	4.0
14.5	Develop effective skills for pupil participation in a democratic society	4.0
16.	Use adequate evaluative procedures	3.7
17.	Maintain necessary records	3.6
18.	Understand inter-relationships among courses in general professional, and music education	3.4

In response to the question "Should these competences receive more or less emphasis in the curriculum?" forty-three of the 61 graduates replying said they should receive more emphasis, while two said the emphasis should be less, and 61 made no response. Of the 29 administrators responding 22 favored more emphasis, two said the emphasis

should be less, and five made no response. While the meaning of the "no response" category is still in doubt, there is strong evidence in favor of more emphasis on professional teaching competences in the teacher training curriculum.

Music teaching competence mean scores concerning competence importance were 3.8 for graduates and 3.9 for music faculty. Concerning curriculum effectiveness music teaching mean scores were 3.2 for graduates and 3.0 for music faculty. The differences between competence importance and curriculum effectiveness for both graduates and music faculty were significant at the 5 per cent level.

Composite rank order of importance to music teachers of the music teaching competences listed in the judgment of graduates and the music faculty at San Jose State College is given in Table V.

TABLE V

Composite Rankings of Graduates and Faculty on Importance to Music Teachers of Music Teaching Competences

<i>Rank Order</i>	<i>Music Teaching Competences</i>	<i>Mean Score</i>
1.5	Select materials appropriate to the performing group	4.9
1.5	Conduct musical organizations and hear intonation, blend, and balance of parts	4.9
4.	Tune and adjust any standard band or orchestra instrument	4.8
4.	Select and establish appropriate tempo for musical performance	4.8
4.	Train and conduct either vocal or instrumental groups	4.8
6.5	Conduct from a four-part score	4.7
6.5	Build program to fit the occasion and audience	4.7
8.	Adapt music to a given performing group	4.6
10.	Be acquainted with sources of music and music information	4.5
10.	Demonstrate the fingering of any standard band or orchestra instrument	4.5
10.	Appreciate and have a strong interest in music literature	4.5
14.	Play the major scale of the instrument on at least one instrument from every section of the band or orchestra	4.4
14.	Understand appropriate vocal range and quality	4.4
14.	Have outstanding ability as an ensemble performer in at least one area of music	4.4
14.	Adapt program materials to varying conditions	4.4
14.	Interpret music through recognition of mood	4.4
18.	Be acquainted with contemporary interpreters of music	4.3
18.	Arrange vocal and instrumental music for performance	4.3
18.	Train and conduct either changed or unchanged voices	4.3
21.	Detect and correct weaknesses in musical performances	4.2

TABLE V (Continued)

<i>Rank Order</i>	<i>Music Teaching Competences</i>	<i>Mean Score</i>
21.	Read any part of a four-part hymn at sight	4.2
21.	Interpret music of various periods and styles	4.2
23.5	Have a knowledge of standard symphonic literature	4.1
23.5	Play at sight simple piano music of the type found in community song books	4.1
25.	Play at sight simple accompaniments for vocal or instrumental music	4.0
26.5	Be acquainted with music of various periods of history	3.9
26.5	Have a knowledge of standard choral literature	3.9
30.	Have outstanding ability as a soloist in at least one area of music	3.8
30.	Recognize standard musical forms	3.8
30.	Be acquainted with styles of composition in various periods of music history	3.8
30.	Have a knowledge of standard solo literature	3.8
30.	Read at sight piano music for rhythmic activities	3.8
34.	Analyze standard musical forms	3.7
34.	Write melodic dictation	3.7
34.	Understand the physical nature of sound	3.7
36.	Improvise simple piano accompaniments	3.6
38.	Be acquainted with arts other than music	3.5
38.	Be acquainted with the lives of master composers	3.5
38.	Have a knowledge of standard chamber literature	3.5
41.5	Integrate other arts with music	3.4
41.5	Sing with correct diction, enunciation, and intonation at least one representative song of the classic, romantic, and modern periods of vocal literature	3.4
41.5	Use music tests and measurements	3.4
41.5	Have a knowledge of standard piano literature	3.4
44.	Reduce and play the score of a three or four-part song at the piano	3.3
45.	Harmonize a figured bass	3.2
46.	Have a knowledge of opera	3.1
47.	Write harmonic dictation	3.0
48.	Compose music	2.5

In response to the question, "Should these competences receive more or less emphasis in the curriculum?" forty-seven of the 61 graduates said they should receive more emphasis, while one said they should receive less, and 13 made no response. Of the nineteen of the music faculty responding 17 favored more emphasis and two made no response.

Conclusions

1. All groups participating in this study are agreed on an average of the considerable importance of the competences listed (four on a five-point scale).
2. Even those competences standing lowest in the composite rank order are of moderate importance (three on a five-point scale).
3. Curriculum effectiveness at San Jose State College is average in developing needed competences in all three areas (three on a five-point scale).
4. On an average, all groups participating in the study rate competence importance higher than they do curriculum effectiveness.
5. All groups participating in this study agreed that the three areas of competence should receive increased emphasis in the curriculum.
6. Music teaching competences ranked of extreme importance are predominantly concerned with public performance (five on a five-point scale).
7. Both graduates and faculty indicate a need for increased emphasis on performance skills.
8. The music faculty were more critical of curriculum effectiveness than were graduates.
9. This data tends to support the California Music Educators Committee on Credentials for Teaching Music in Schools recommendations that more of the units in the music major be allotted to music performance competences.

BIBLIOGRAPHY

1. Baird, Forrest J. *A Follow-Up of Secondary School Music Teachers Prepared at San Jose State College*. Unpublished Doctor's Dissertation (Ed.D.), Stanford University, 1955.
2. California Music Educators Association, Committee on Credentials for Teaching Music in Schools (Van A. Christy, Chairman). *Report*. San Jose, California, April, 1952. (Mimeo graphed)
3. Kinney, Lucien B. *Measure of a Good Teacher*. A monograph on teacher evaluation with a check-list for contributions of professional experience to determine factors in teaching competence. San Francisco: California Teachers Association, 1952.

The Relation Between Interest and Aptitude Tests in Art and Music

J. C. GOWAN AND MAY SEAGOE

Belief has it that interest and talent in the arts are more or less synonymous. Those who are talented are assumed to be interested and vice versa. Perhaps this is due to the fact that in professional artists a high degree of both is to be expected, and these persons are the first examples which come to mind when the words "artist" or "musician" are used. But this generalization is no answer to the important question of the relationship between artistic talent and interest among people in general. Such a query can be phrased more specifically to ask whether a test of aptitude can predict interest, or the converse of this. To seek an answer for a specific group, the following procedure was employed.

The population consisted of a hundred credential candidates in education at UCLA, about three-quarters of whom were women. The tests and scales used were 1. the *American Council on Education Psychological Test; College Form*, 1947, gross score (hereafter called the ACE) as a check variable for intelligence; 2. the *Meier Art Judgment Test* as a measure of artistic aptitude; 3. the Artistic and Musical scales of the *Kuder Preference Record* as measures of these respective interests; 4. the aesthetic scale of the *Allport-Vernon Study of Values* (unrevised) as a measure of character structure akin to interests; and 5. the six subscores (pitch, loudness, rhythm, time, timbre, and tonal memory) of the *Seashore Measures of Musical Talents* as measures of musical aptitude. Although the authors of this last test did not so provide, the subscores were totaled in this study with the hope that through greater length and reliability an over-all assessment of musical aptitude might be reached.

John Curtis Gowan is Assistant Professor at the San Fernando Campus of Los Angeles State College, Northridge, California. He was previously a counselor for the Culver Military Academy in Indiana and an observer for the American Council of Education Teacher Characteristics Study. He received his doctorate from the University of California at Los Angeles in 1952.

May Seagoe is Professor of Education, University of California, Los Angeles. She previously served as counselor in several Southern California school districts, including Pasadena and Los Angeles. She obtained her doctorate from Stanford University in 1934.

Findings of the Study

Table I gives for reference the means, standard deviations and standard errors of the means of the population sampled.

TABLE I
Basic Statistics for Test Scales Used

<i>Test and Scale</i>	<i>Number</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>Standard Error of Mean</i>
ACE Total	84	126.2	20.3	2.2
Meier Art Judgment	100	100.7	7.96	0.80
Allport-Vernon Aesthetic	100	29.52	5.46	0.55
Kuder				
Artistic	100	57.25	16.35	1.64
Musical	100	26.98	7.52	0.75
Seashore				
1) pitch	100	46.12	4.68	0.47
2) loudness	100	44.80	4.18	0.42
3) rhythm	100	27.07	2.46	0.25
4) time	100	39.54	4.10	0.41
5) timbre	100	39.50	5.02	0.50
6) tonal memory	100	26.94	3.37	0.34
total score	100	220.75	13.15	1.32

Table II gives the intercorrelations of the Seashore test with other measures. It will be noticed that only one subscore (pitch) has a significant correlation with any of the other variables (that of .27 with the Kuder

TABLE II
Intercorrelations^a Between Musical Aptitude and Other Variables

<i>Seashore Test of Musical Ability</i>	<i>ACE Total^b</i>	<i>Allport-V. Aesthetic^{co}</i>	<i>Kuder Musical^{co}</i>
1. Pitch	.12	-.17	.27 ^b
2. Loudness	.12	.12	-.01
3. Rhythm	-.01	.05	-.06
4. Time	.00	.13	-.09
5. Timbre	-.11	.00	-.01
6. Tonal Memory	-.05	-.19	.04
Total	.00	.08	.13

^a: product-moment coefficient.

^b: significant at the 1% level.

^c: N = 84, Standard Error of r = .12 or less.

^{co}: N = 100, Standard Error of r = .10 or less.

Musical scale). There are no significant correlations of any of the Seashore scales with either the ACE or the Allport Aesthetic scale, even when the subscores are totaled. From this, it may be inferred, subject to the limita-

tions of the study, that whatever the Seashore measures has no correlation with intelligence and little if any correlation with musical interests.

Table III gives the intercorrelations of the Meier Art Judgment, the Allport Aesthetic, and the Kuder Musical Scales with the ACE, the Allport Aesthetic, and the Kuder Artistic scales. The Meier shows no correlation

TABLE III

Intercorrelations Between Artistic Aptitude and Other Variables

Test and Scale	ACE Total ^a	Allport-Vernon Aesthetic ^{ab}	Kuder Artistic ^{ab}
Meier Art Judgment	.19	.05	.32b
Allport Aesthetic	.26a	—	.30b
Kuder Musical	.10	.13	—

^a: N = 84, Standard Error of $r = .12$ or less.

^{ab}: N = 100, Standard Error of $r = .10$ or less.

a: significant at the 5% level; in a parallel study with N = 1700, the correlation between these two variables was .16, significant at the 1% level. Interestingly enough, the ACE "I" (linguistic) contributed the variance, not ACE "Q" (quantitative); the correlation of ACE L with A-V Aesthetic was .22 while that of Q was -.04.

b: significant at the 1% level.

with the Allport, but a significant (though low) correlation with the Kuder Artistic. It, in turn, correlates significantly with the Allport, and the latter shows a very low, but significant, correlation with the ACE. The Kuder Musical shows no significant correlations in this table. One may infer that the Kuder Artistic correlates to some extent both with artistic aptitude and another measure of artistic interest. There is little if any correlation with intelligence, and little if any cross correlation between artistic and musical interests.

It should be noted that such a population tends to be quite homogeneous, and this effect may lower the correlations.

Summary

Subject to the limitations of the population and procedures employed in this study, it may be inferred that:

1. Little if any correlation has been shown to exist between a measure of musical aptitude (the Seashore) and measures of musical interest.
2. A small but significant correlation has been shown between a measure of artistic aptitude (the Meier) and a measure of artistic interest (the Kuder).
3. Correlations of measures of artistic and musical aptitude and interest with intelligence are negligible.
4. There is negligible correlation between artistic and musical interests.
5. Such significant correlations as are found are very low, and entirely useless for individual predictive purposes.

Book Reviews

SOME OBSERVATIONS ON AMERICAN EDUCATION

ROBERT M. HUTCHINS

New York: Cambridge University Press, 1956. 112 pages. \$2.75

This book is based on a series of lectures given at various English universities in 1954. Since the author was trying to interpret the nature, strengths, and weaknesses of American education to an audience presumed to have little accurate knowledge of it, the volume appears to give an unusually clear view of what is really thought by the Hutchins school of criticism of education.

The author admits that he is more concerned with higher education than with elementary and secondary education. However, he does not hesitate to discuss these directly; while much that he says about universities and colleges has obvious implications for other levels.

The first thing that is made clear is that Dr. Hutchins believes in education for everybody to the greatest degree possible. The second thing is that he realizes clearly some of the real problems confronting American education. He is aware of the lack of status given to elementary and secondary teachers. He recognizes that schools are moulded by forces in the community and continuously operate under pressures. In fact, many educators will gain new insight into the nature and the problems of our schools by reading this book.

On the other hand, very little good can be said for the author's suggestions as to what should be done about the shortcomings of American education. That is, very little good can be said if one accepts a functional definition of education. If education is the mere acceptance of knowledge in the abstract, then it may be that Dr. Hutchins makes sense. However, he does not appear to accept this latter view of education himself. In his concluding remarks he says, "To put it another way, education is the process of learning to lead the good life. The permanence of the good habits that are formed by good acts, that induce further good acts, and so constitute a good life, is guaranteed by an intellectual grasp of the aims of life and of the means of achieving them."

Here, perhaps, is the crux of the conflict between Dr. Hutchins and those holding similar views and those who know something about education. In the first place, he appears to be quite ignorant of the findings of

psychology and sociology, or else he would never make the ridiculous assertion that an intellectual grasp of anything guarantees a certain course of action. Secondly, this ignorance of the facts of life makes it possible for him to assume that schools and educators can find an acceptable set of "aims of life" by themselves. Hence, he blames education and the American people for not carrying out a task which has not yet been set. Much of his criticism of our schools is really a criticism of our way of life.

Now, Dr. Hutchins is entitled to criticize our way of life, for he upholds many of the important features in it. But, before educators start to try to answer his criticisms of American education, they should pause to reconsider. It is an impossible task. Dr. Hutchins lacks the fundamental knowledge of society and psychology necessary to understand what educators are saying. And he just does not agree with most Americans about what life and civilization are.

All of which does not make the author an unintelligent man. His observation of the actual situation in American education, particularly at the college and university level, is very keen. It will not hurt at all to read it. In fact, it may needle some educators into giving a little thought to remedying some of the absurdities that even Dr. Hutchins can see.

HIGH SCHOOL PERSONNEL WORK TODAY

JANE WARTERS

Second Edition. New York: McGraw-Hill Book Company, Inc., 1956 358 pages. \$4.75.

In the Preface the author states that the purpose of the book is to bring together and coordinate the important concepts of student personnel work in order to help those engaged in such work in the schools. She has been partly successful in doing this. At least, just about all phases of student personnel work and theory have been touched on in this volume. Unfortunately, this very comprehensiveness may have served to make the book less useful than it might have been to the typical school dean or counselor.

The individual with a good background in student personnel work will find this book very useful as a source of reference and of condensed theoretical statements. However, like most compendiums written in the form of textbooks, the volume is in danger of giving an entirely false impression of the magnitude and complexity of its subject. Granting that personnel work is one of the most vital aspects of secondary education, nevertheless it is highly unlikely that more than a minor fraction of the processes and activities touched on by the author can be actually employed in a given situation. If the reader assumes that ordinary school programs can finance

the type of service demanded by a full application of the principles discussed in the book, he is very likely to find himself extremely frustrated when he attempts to practice what the author preaches.

The real danger is not, however, to the student who attempts to put on a program possible only under ideal situations. The real danger is that the harassed classroom teacher or counselor will be forced to talk a good program in order to satisfy an administrator who has read the book without due caution.

On the other hand, the book is very comprehensive. It makes use of the latest advances in psychology, sociology, and education. Of particular interest is the author's inclusion of material from the industrial field. Although the format of the book tends to make it appear somewhat crowded, there is no doubt that the purchaser will get more per page than is usual in education books.

HOW TO GET BETTER SCHOOLS, A Tested Program

DAVID B. DREIMAN

New York: Harper and Brothers, 1956. 267 pages. \$3.50

As stated in the Preface, "This book is essentially the story of the National Citizens Commission for the Public Schools, what it is, why it is, and what it has been about in the last half-dozen years since its founding." As such, it is addressed primarily to laymen interested in the welfare of the country and its citizens. It should be read by all persons interested in schools and children. It is required reading for all school people.

The first sixty pages are devoted to pointing out some of the problems concerning schools which can only be met by concerted community actions. Five cases are described in detail, illustrating the thesis that something can be done about it if citizens work hard enough and intelligently enough to get action. The National Citizens Commission is described in the second part of the book. This description is primarily in terms of its service to other communities that would like to do what was done by the five reported in the first part. The remainder of the book (well over half of it) is essentially a handbook for local citizen action.

Whether or not a particular school system is in need of concerted citizen aid at the present time, this book will prove of considerable value to every teacher and administrator in it. If bonds, tax limitation increases, or other action by the public is needed, this book should already have been consulted. If not, it is not too late to get it, study it, and then see that community leaders read it.

CALIFORNIA JOURNAL OF EDUCATIONAL RESEARCH

Published by
California Teachers Association
693 Sutter Street
San Francisco 2, California

INFORMATION AND INSTRUCTIONS REGARDING MANUSCRIPTS

The California Journal of Educational Research welcomes original manuscripts on educational research. The types of material desired are:

1. City and county school research pertaining to curriculum, guidance and counseling, evaluation, supervision, and finance.
2. Digests of theses and dissertations that have practical application. Such theses and dissertations, however, must officially be approved for publication by a member of the Editorial Board (see names on inside of front cover) or by the college or university at which the research was done.
3. Studies that present novel, but tested, approaches to the solution of educational problems.

Manuscripts, except for feature articles, should be limited to approximately 1500 words. They should be typewritten double-spaced, on one side of the paper, and submitted in duplicate. Only original manuscripts will be accepted for publication.

Tables, charts and graphs often enhance a research report. When used, they should be clearly and accurately labeled. They should also be inked to size and their places designated in the manuscript.

Footnotes should be complete as to author, title, publisher, date and pages. Bibliographies accompanying manuscripts should also be complete as to data, and should be arranged alphabetically by authors.

Manuscripts will not be returned unless the author so requests, in which case a stamped, self-addressed envelope should accompany the manuscript.